

# ADVERSE EVENTS AND INFECTIONS REMAIN AS MAJOR CONCERNS WITH REMISSION INDUCTION TREATMENT OF ANCA-ASSOCIATED VASCULITIS AND COMORBIDITY IS AN ADDITIONAL CHALLENGE

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## INTRODUCTION

ANCA-associated vasculitis (AAV) is a severe systemic disease with acute morbidity and mortality and long term organ damage from a combination of ongoing vasculitis activity and its therapy.

High dose glucocorticoids are part of current treatment guidelines but are associated with high risk of infections, especially in the first 12 months of treatment and in the longer term with a series of adverse events.

The demographics of AAV suggest that patients may have preexisting comorbidity when they first present with AAV and this must impact treatment decisions and clinical outcomes. This comorbidity will also change the risk and impact of treatment-related adverse events in particular those with high dose glucocorticoids.

This study aimed to examine real world AAV treatment practice in Europe in order to understand comorbidity at the time of remission induction treatment and the impact of that treatment on infections and treatment related adverse events (AE) over the first 12 months of therapy.

## METHODS

**STUDY DESIGN.** Retrospective clinical audit of healthcare records from incident and relapsing AAV patients managed by 399 physicians (240 nephrologists, 120 rheumatologists and 20 internal medicine physicians) who routinely manage incident AAV patients (France, Germany, Italy and UK).

**INCLUSION & EXCLUSION CRITERIA.** Physicians selected incident or relapsing adult patients with granulomatosis with polyangiitis (GPA) or microscopic polyangiitis (MPA) who had initiated remission induction therapy between November 2014 and February 2017. Patients had at least 6 months of therapy and continuous care by the physician over the time of follow, were over 18 years, had a confirmed diagnosis of AAV for at least 12 months, and had received at least one course of induction therapy to achieve remission.

**DATA COLLECTION AND ANALYSIS.** Physicians completed up to 3 programmed patient record forms (PRF) - this online data collection tool was designed to gather clinical outcome data over the first 12 months of AAV therapy. Data were collected relating to baseline presentation with AAV then outcomes at 1, 3, 6 and 12 months. Descriptive statistics were used to analyze the data

**PARTICIPANTS.** 1197 patients were studied in total of which 929 AAV patients were incident patients and 268 were relapsing patients - they commenced remission induction therapy following incident diagnosis or relapse. Incident patients - 54.4% were classified as GPA and 45.6% MPA. Relapsing patients - 54.1% were classified as GPA and 45.9% MPA. These AAV patients were analysed in detail to describe the clinical outcomes and adverse outcomes

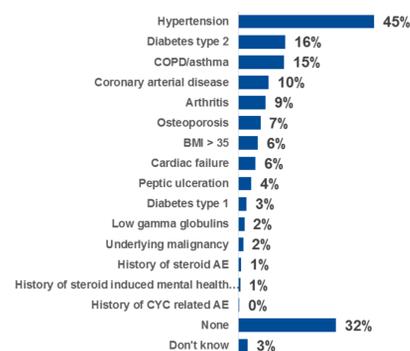
## RESULTS

**Figure 1 - Comorbidity is common in AAV at diagnosis in incident patients and in relapsing patients.** Comorbidity at the time of initiation therapy is common in both incident and relapsing patients.

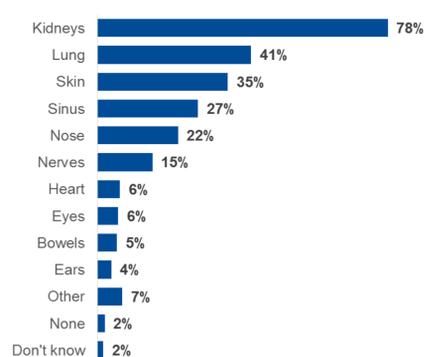
Common comorbidities are likely to be impacted by current therapy in particular high dose glucocorticoids.

Only 32.2% of incident and 16% of relapsing patients were free from comorbidity when remission induction therapy was commenced.

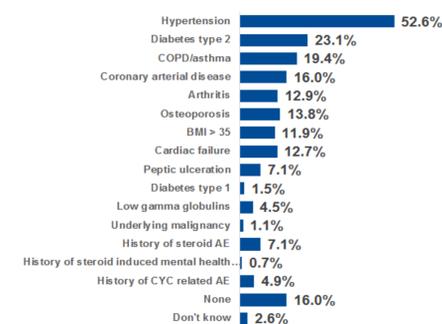
### Co-morbidities at diagnosis



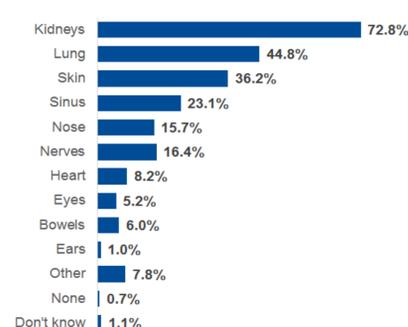
### Organs involved at diagnosis



### Co-morbidities at relapse



### Organs involved at relapse

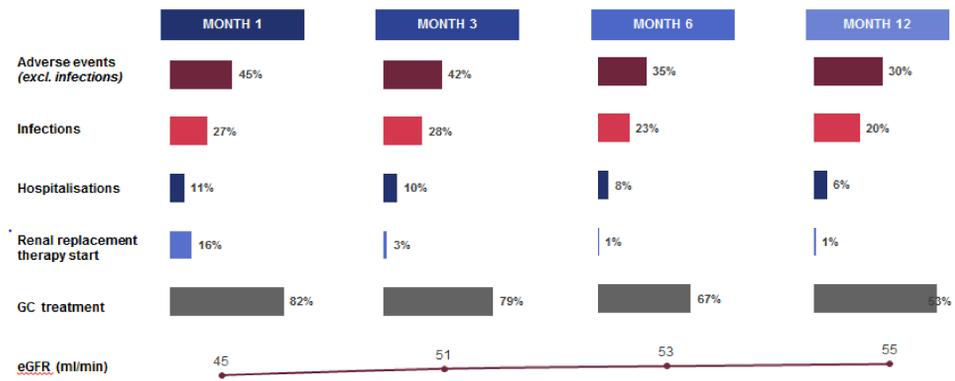


**Age, severity and treatment at start of remission induction treatment.** Relapsing patients were older (mean 58.3 ± SD 14.2 vs 56.8 ± 13.1 years) than incident patients but fewer had severe rapidly progressive AAV ( 25.7% vs 33.6%).

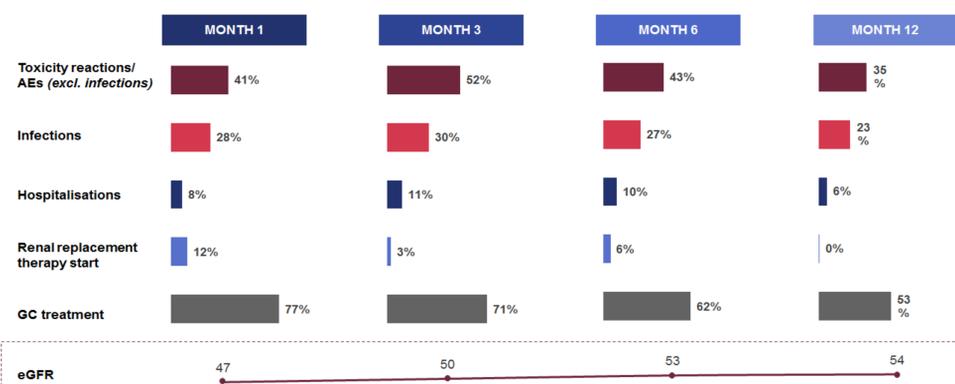
There were differences in the initial remission induction therapy (incident vs relapsing)

Cyclophosphamide -	59.2 vs 35.1%
Rituximab -	24.4 vs 44.0%
Glucocorticoid -	82.6 vs 76.5%

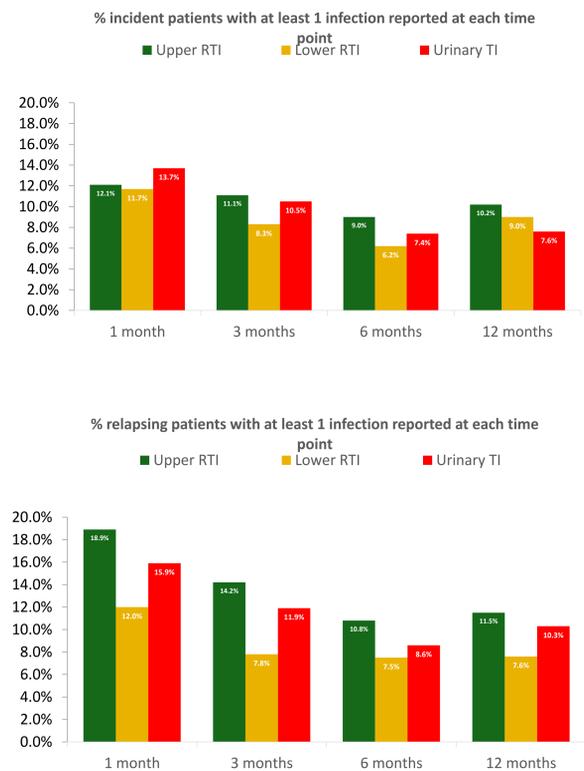
**Figure 2 - Adverse events and infections are common in incident patients and healthcare resource use is significant.** Many incident AAV patients experience adverse events and infections and the majority remain on GCs over the first 12 months of therapy.



**Figure 3 - Adverse events and infections are also common in relapsing patients -** Relapsing patients also experience infections and adverse events. In addition patients are frequently still receiving glucocorticoids at 12 months.



**Figure 4 - incident and relapsing patients experience respiratory tract and urinary infections particularly in the first 6 months.** Relapsing patients experienced more infections



## CONCLUSIONS

Comorbidity is common at the time of start of remission induction therapy in AAV, particularly in relapsing patients.

Treatment related AEs and infections are a challenge in incident and relapsing patients especially in the first months of therapy when glucocorticoid dose is highest. In particular upper and lower respiratory infections are common, along with urinary tract infections.

When making treatment decisions in AAV the impact of comorbidity should be considered alongside the risks of therapy in terms of infection and adverse events.

There is an unmet need for new treatment options in AAV to allow effective control of AAV activity while reducing risk of complications and worsening comorbidity.

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